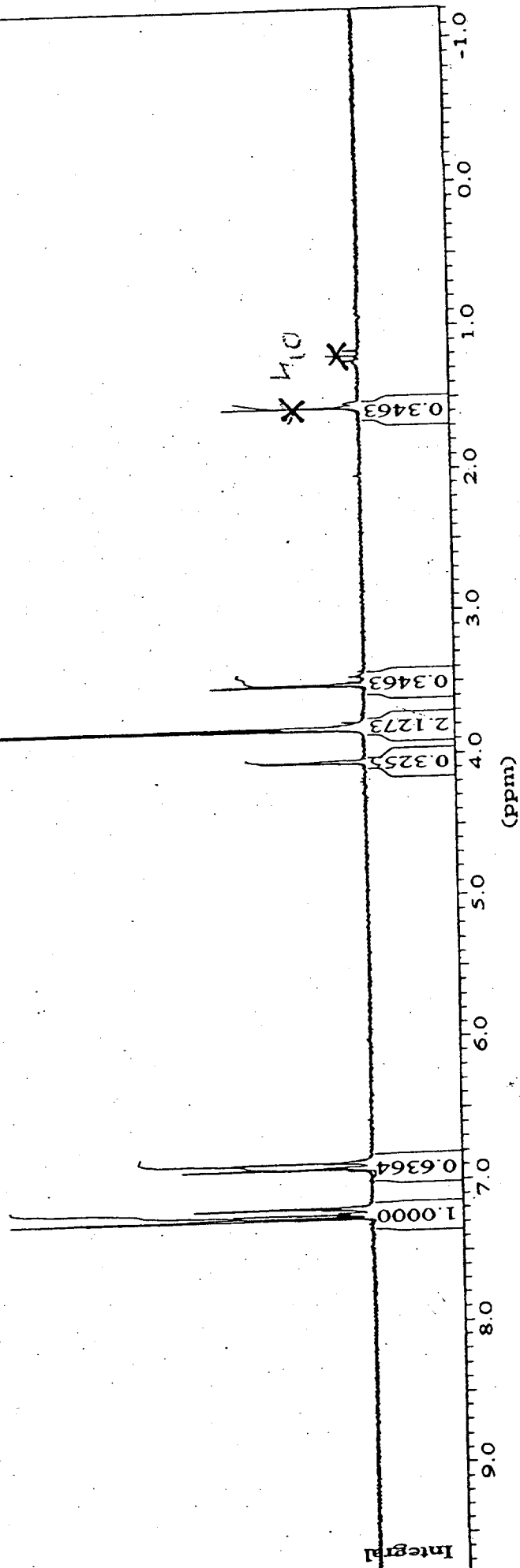
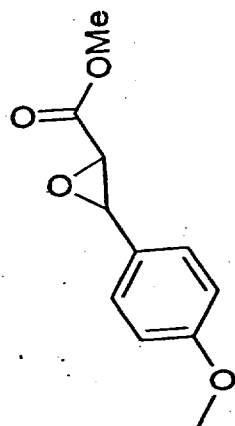


1

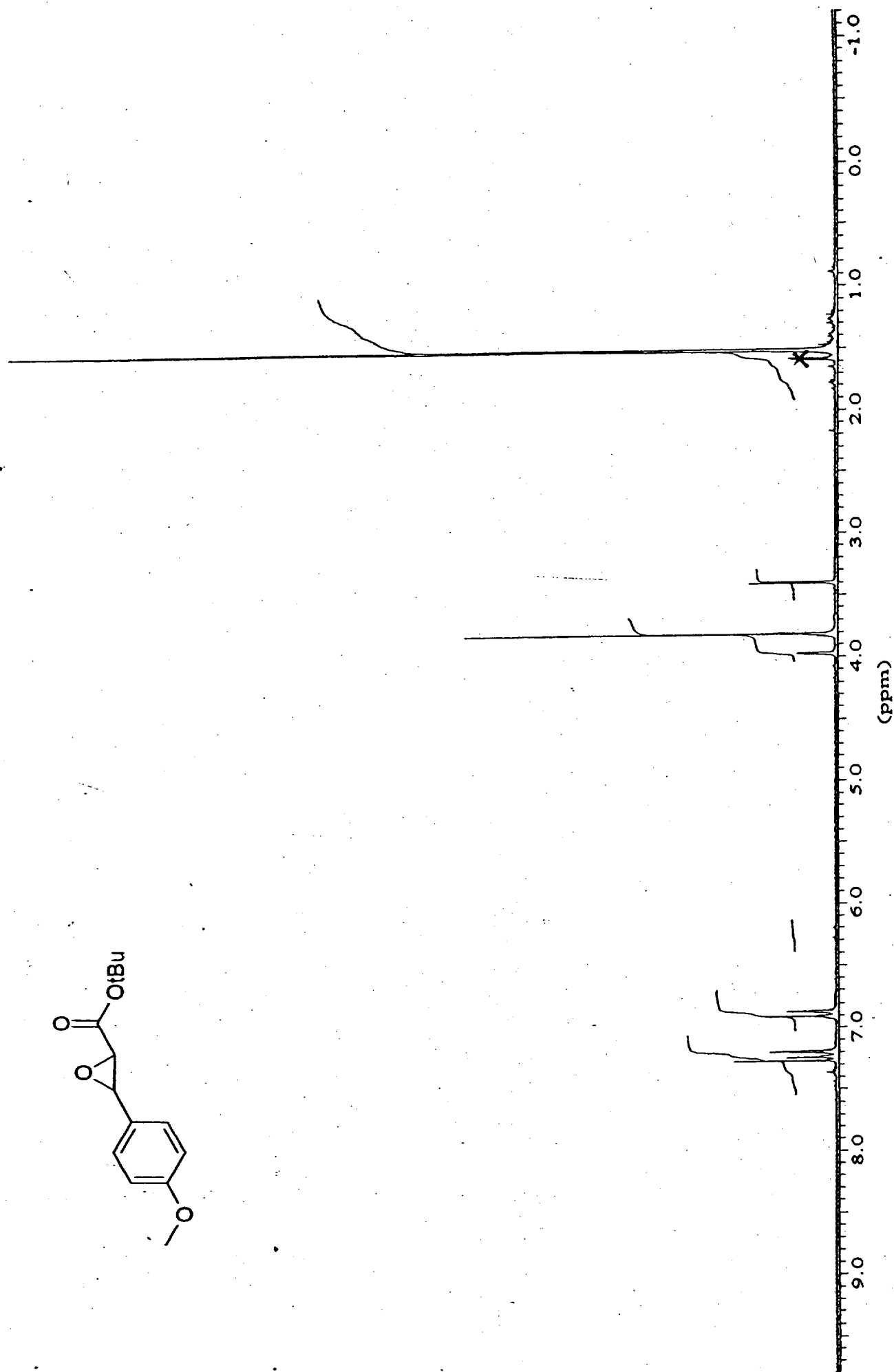
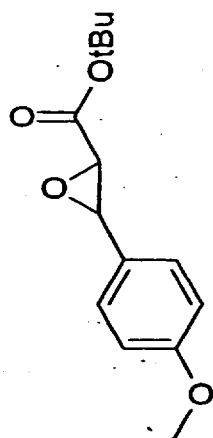
SI 02.0001721 REV. 2
10-16-00

¹H NMR 200 MHz (CDCl₃)

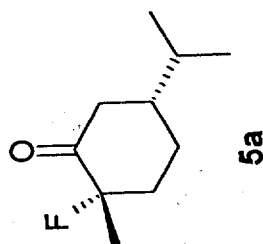


2

NMR 200 MHz (CDCl₃)



Σ

¹H NMR 400 MHz (C₆D₆)

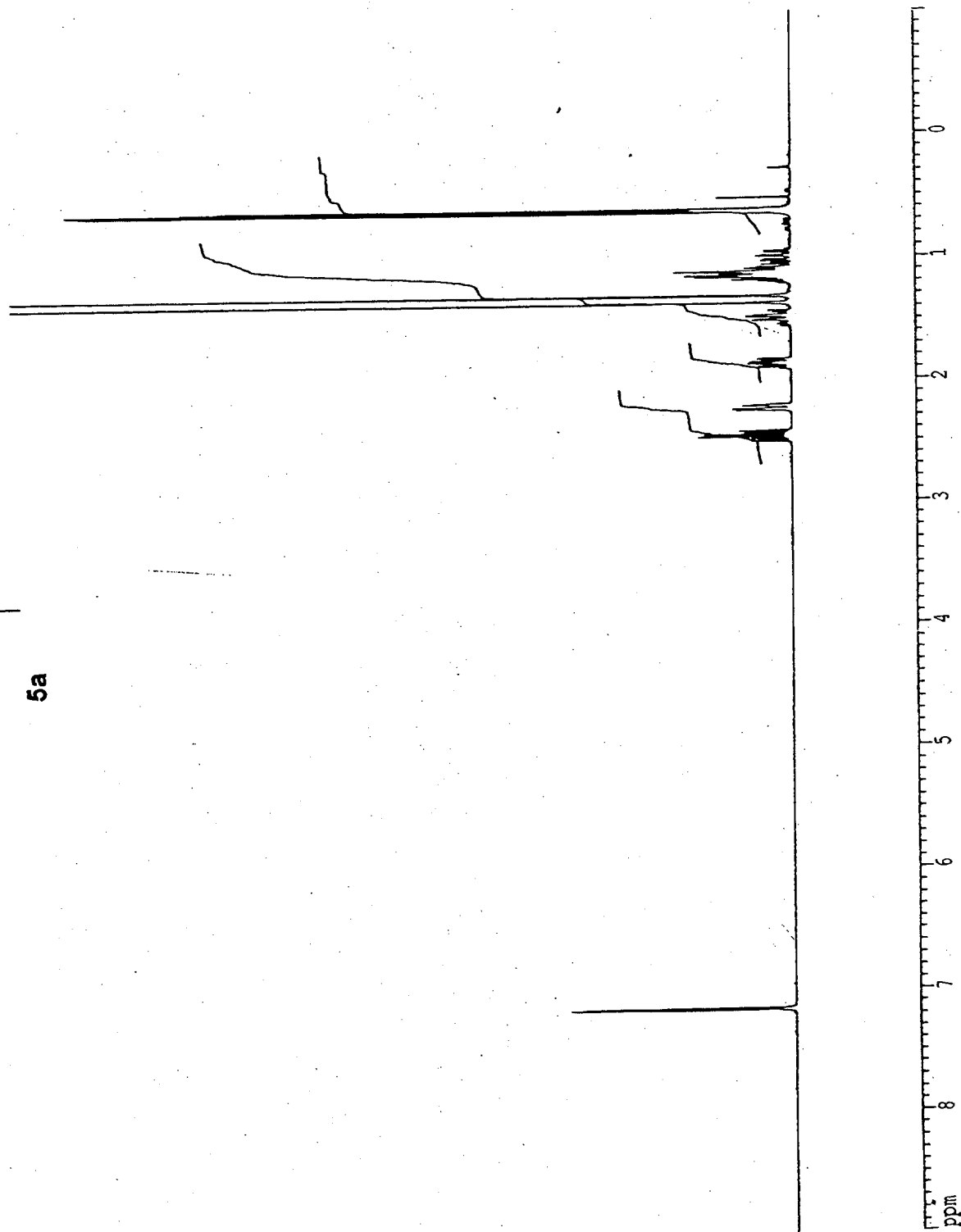
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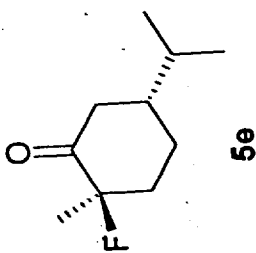
Current Data Parameters
NAME      lb51a.101
EXPNO     1
PROCNO    1

F2 - Acquisition Parameters
Date_     20000106
Time      10.30
INSTRUM   spect
PROBHD    5 mm QNP 1H/1
PULPROG   zg30
TD         32768
SOLVENT   C6D6
NS         16
DS         2
SWH        8223.685 Hz
FIDRES     0.250967 Hz
AQ         1.9923444 sec
RG         143.7
DW         60.800 usec
DE         10.00 usec
TE         300.0 K
D1         2.00000000 sec
P1         8.00 usec
SFO1      400.1324710 MHz
NUC1       1H
PL1        -3.00 dB

F2 - Processing parameters
SI         16384
SF         400.1300000 MHz
WDW        EM
SSB        0
LB         0.15 Hz
GB         0
PC         1.00

1D NMR plot parameters
CX         20.00 cm
FLP        9.000 ppm
F1         3601.17 Hz
F2P        -1.000 ppm
F2         -400.13 Hz
BPMCK      0.50000 ppm/cm
HZCM       200.06500 Hz/cm
  
```



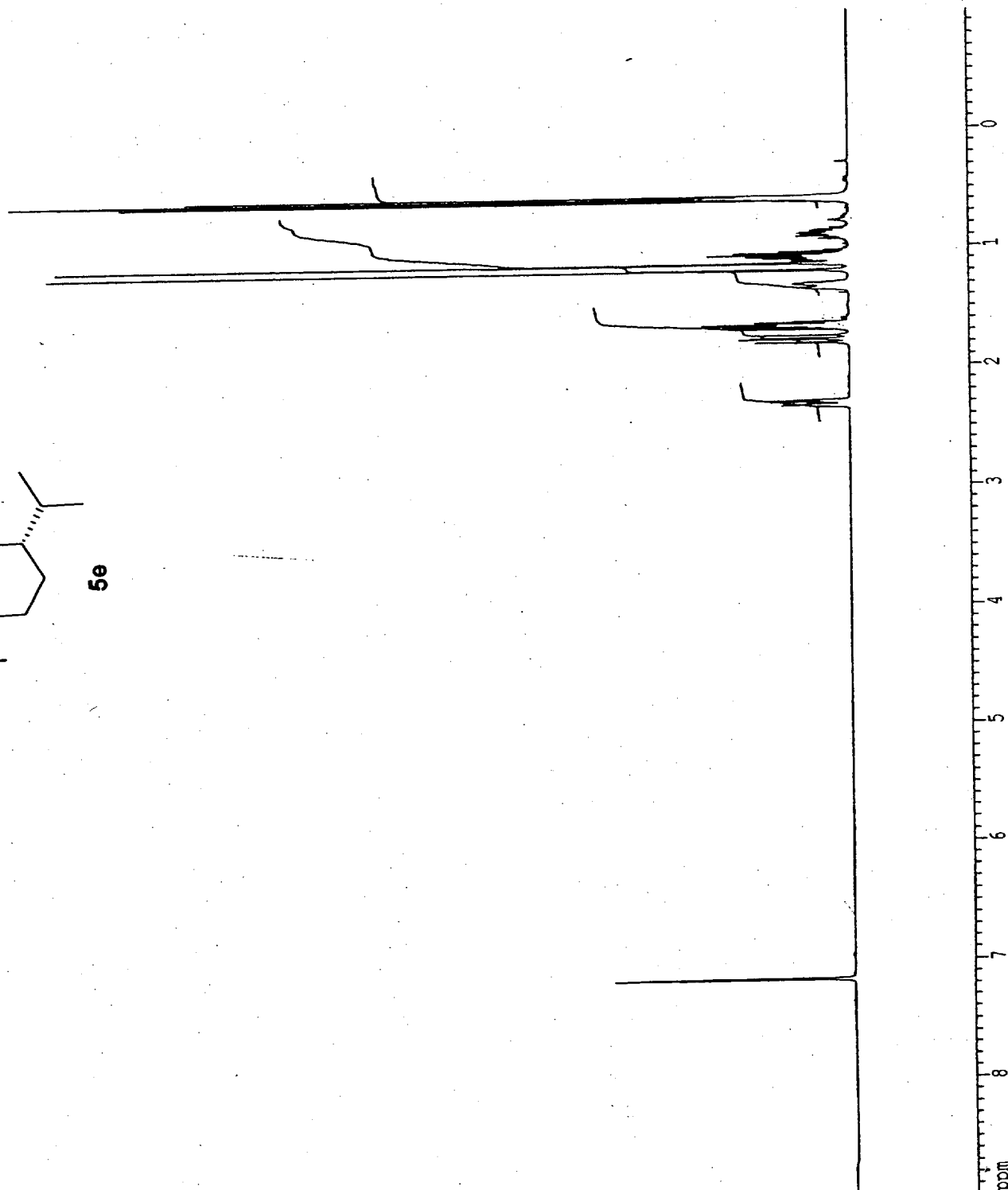
¹H NMR 400 MHz (C₆D₆)

Current Data Parameters
NAME 1b15dbz.137
EXPNO 1
PROCNO 1

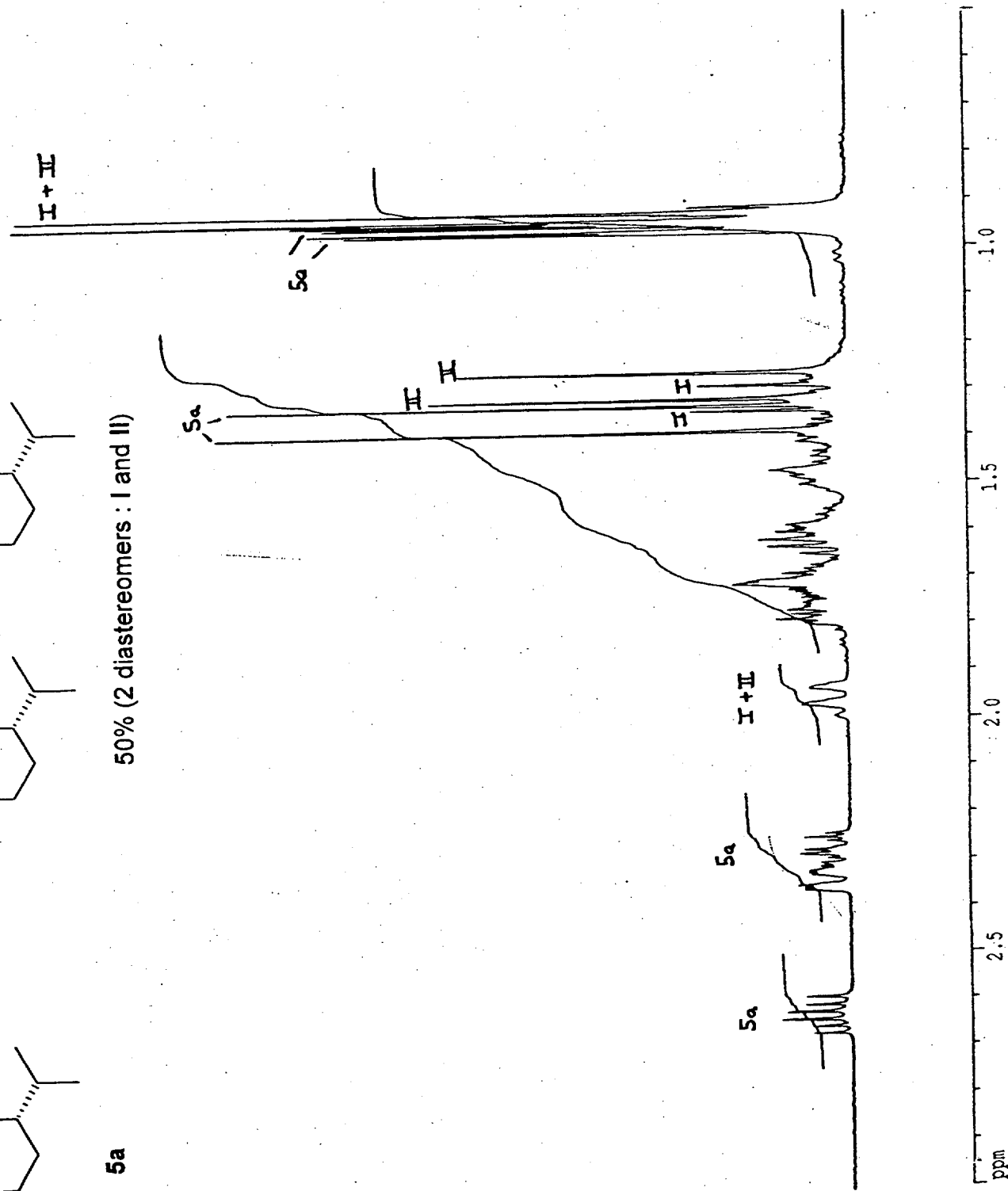
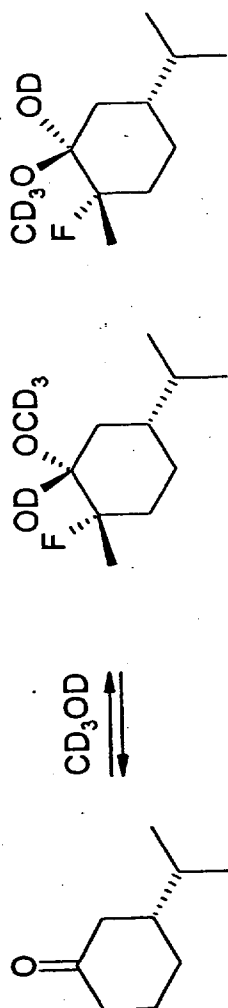
F2 - Acquisition Parameters
Date_ 990915
Time 13.49
INSTRUM spect
PROBHD 5 mm QNP 1H/1
PULPROG zg30
TD 32768
SOLVENT C6D6
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.250967 Hz
AQ 1.9923444 sec
RG 90.5
DE 60.800 usec
TE 10.00 usec
300.0 K
D1 2.0000000 sec
P1 8.00 usec
SFO1 400.1324710 MHz
NUC1 1H
PL1 -3.00 dB

F2 - Processing parameters
SI 16384
SF 400.1300000 MHz
WDW EM
SSB 0
LB 0.15 Hz
GB 0
PC 1.40

1D NMR plot parameters
CX 20.00 cm
F1P 9.000 ppm
F1 3601.17 Hz
F2P -1.000 ppm
F2 -400.13 Hz
PPMCM 0.50000 ppm/cm
HZCM 200.06500 Hz/cm



5

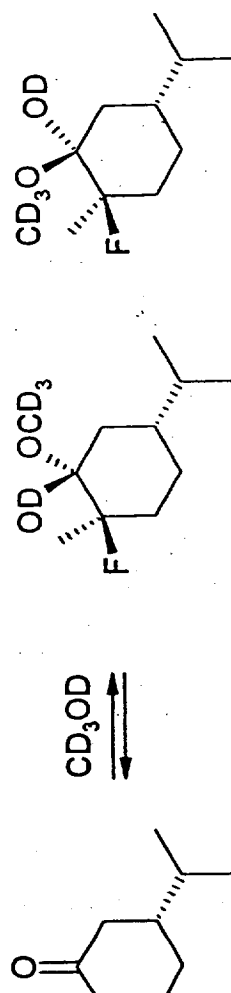
¹H NMR (400 MHz)

Current Data Parameters
 NAME lb102a.123
 EXPNO 4
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20000605
 Time 16.09
 INSTRUM spect
 PROBHD 5 mm QNP 1H/1
 PULPROG zg30
 TD 32768
 SOLVENT MeOH
 NS 16
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.250967 Hz
 AQ 1.992344 sec
 RG 256
 DW 60.800 usec
 DE 10.00 usec
 TE 300.0 K
 D1 2.00000000 sec
 P1 8.00 usec
 SFO1 400.1324710 MHz
 NUC1 1H
 PL1 -3.00 dB

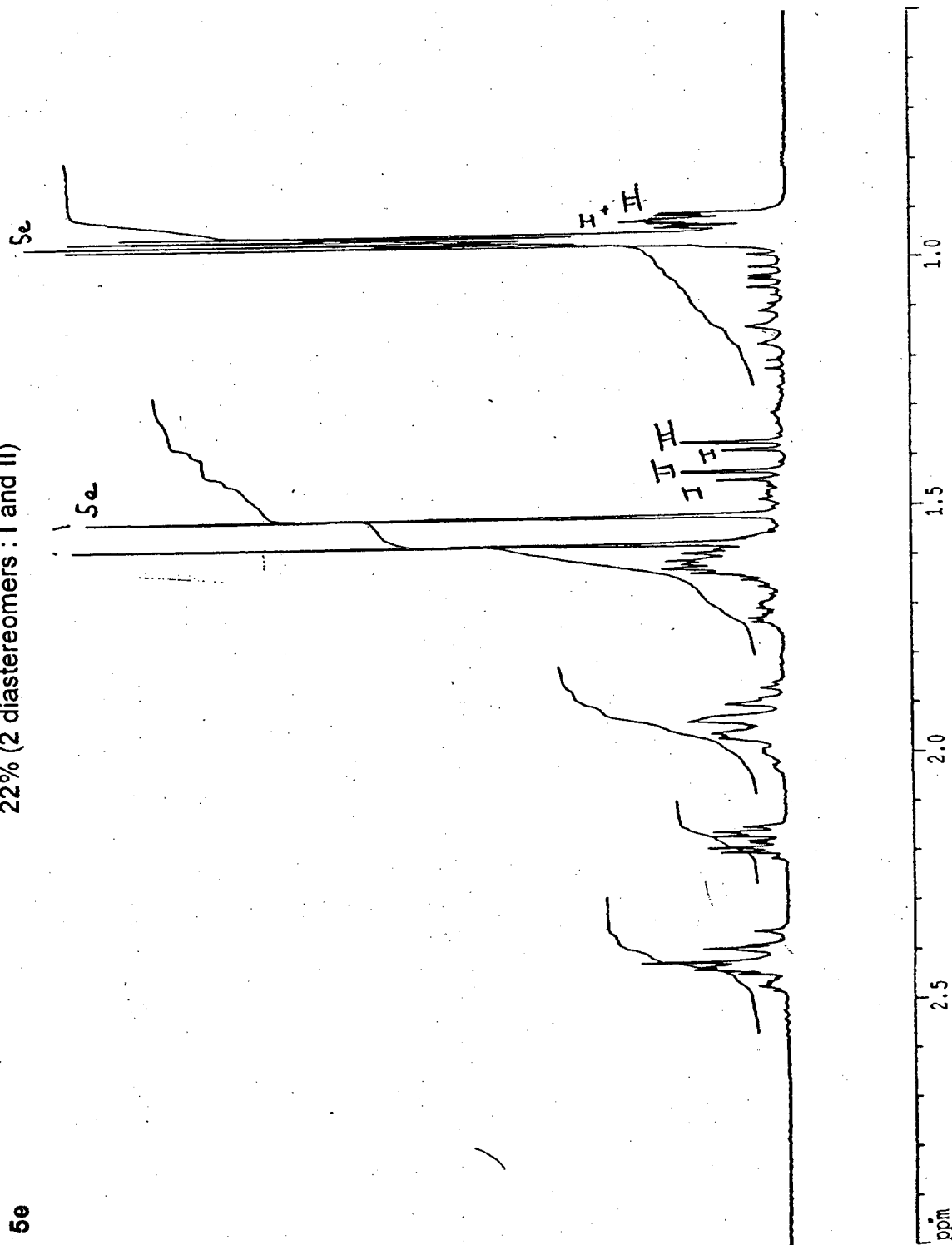
F2 - Processing parameters
 SI 16384
 SF 400.1300000 MHz
 EM
 WDW 0
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 20.00 cm
 F1P 3.000 ppm
 F1 1200.39 Hz
 F2P 0.500 ppm
 F2 200.07 Hz
 PPMCH 0.12500 ppm/cm
 HZCM 50.01625 Hz/cm

¹H NMR (400 MHz)

5e

22% (2 diastereomers : I and II)



Current Data Parameters
 NAME lb102b.123
 EXPNO 4
 PROCNO 1

F2 - Acquisition Parameters

Date_ 20000606
 Time 11.04
 INSTRUM spect
 PROBHD 5 mm QNP 1H/1
 PULPROG zg30
 TD 32768
 SOLVENT MeOH
 NS 8
 DS 0
 SWH 8223.685 Hz
 FIDRES 0.250967 Hz
 AQ 1.9923444 sec
 RG 256
 DW 60.800 usec
 DE 10.00 usec
 TE 300.0 K
 D1 2.0000000 sec
 F1 8.00 usec
 SFO1 400.1324710 MHz
 NUC1 1H
 PL1 -3.00 dB

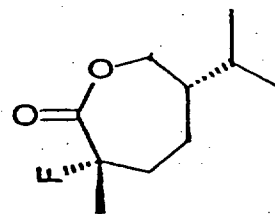
F2 - Processing parameters

SI 16384
 SF 400.1300000 MHz
 WDW EM
 SSB 0
 LB 0.20 Hz
 GB 0
 PC 1.00

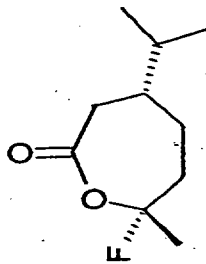
1D NMR plot parameters

CX 20.00 cm
 FLP 3.000 ppm
 F1 1200.39 Hz
 F2P 0.500 ppm
 F2 200.07 Hz
 PPMCM 0.12500 ppm/cm
 HZCM 50.01625 Hz/cm

t

MR 400 MHz (C₆D₆)

Isomer I



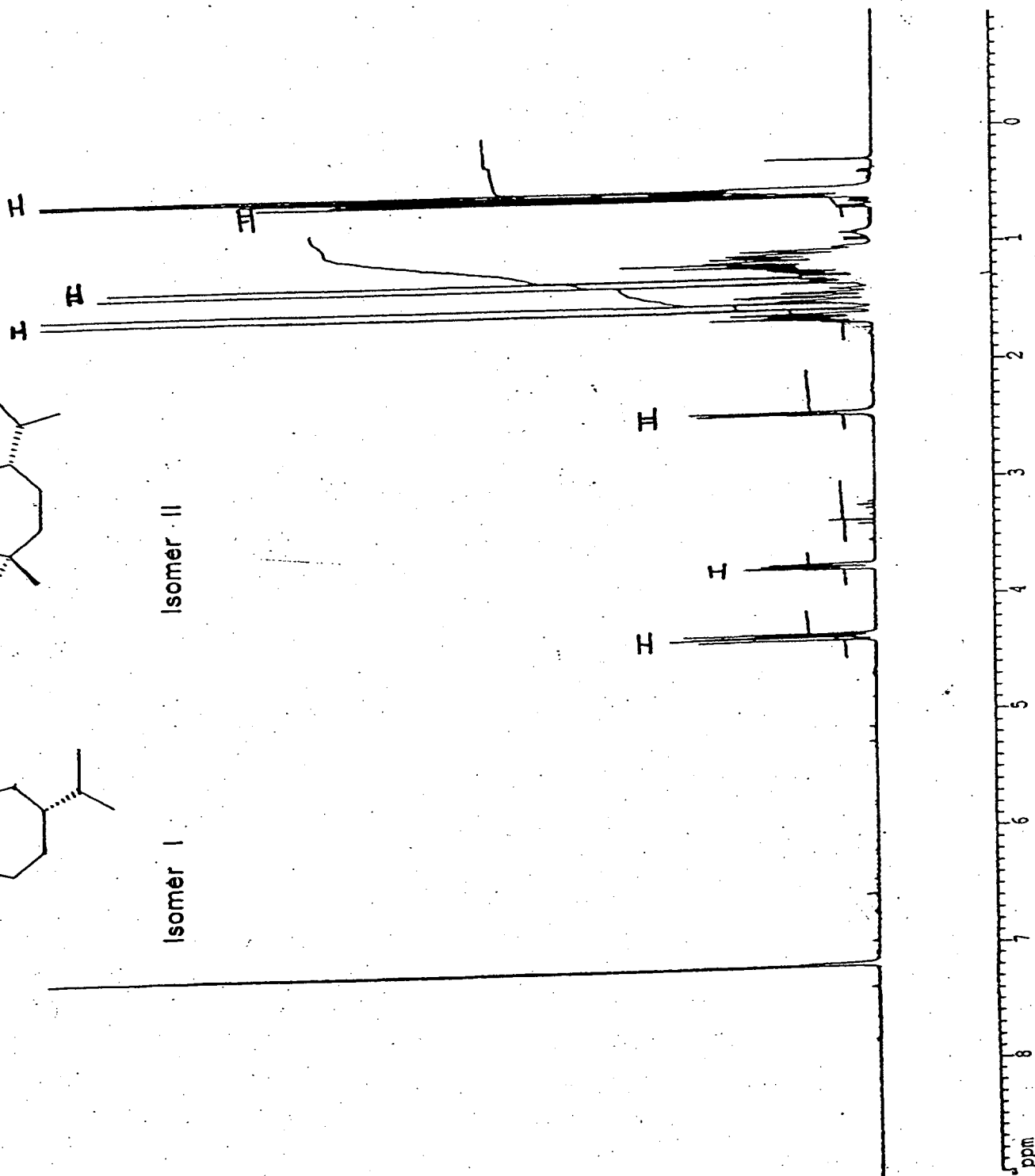
Isomer II

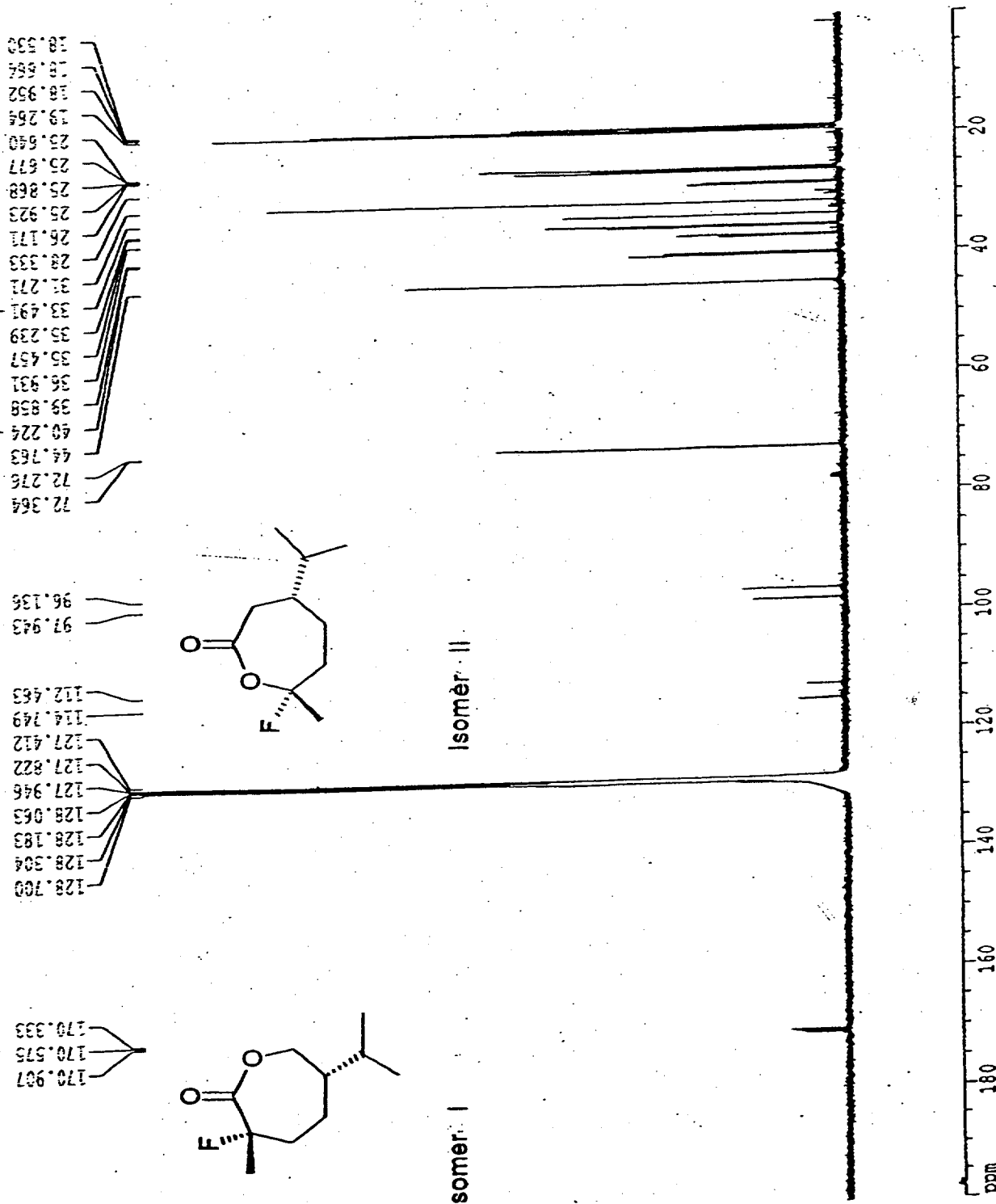
Current Data Parameters
 NAME lbh1.139
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 991001
 Time 14.29
 INSTRUM spect
 PROBHD 5 mm QNP 1H/1
 PULPROG zg30
 TD 32768
 SOLVENT CDCl₃
 NS 16
 DS 2
 SWH 8221.685 Hz
 FIDRES 0.250967 Hz
 AQ 1.9923444 sec
 RG 161.3
 DW 60.800 usec
 DE 10.00 usec
 TE 300.0 K
 D1 2.00000000 sec
 P1 8.00 usec
 SFO1 400.1324710 MHz
 NUC1 1H
 PL1 -3.00 dB

F2 - Processing Parameters
 SI 16384
 SF 400.1300000 MHz
 WDW EM
 SSB 0
 LB 0.15 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 20.00 cm
 F1P 9.000 ppm
 F1 3601.17 Hz
 F2P -1.000 ppm
 F2 -400.13 Hz
 PPMH 0.50000 ppm/cm
 HZCM 200.06500 Hz/cm



400 MHz (C₆D₆)

Current Data Parameters
NAME lbel13.139
EXPNO 2
PROCNO 1

F2 - Acquisition Parameters
Date_ 991001
Time 15.59
INSTRUM spect
PROBHD 5 mm QNP 1H/1
PULPROG zgpg30
TD 65536
SOLVENT C6D6
NS 13360
DS 2
SWH 31847.133 Hz
FIDRES 0.485949 Hz
AQ 1.0289632 sec
RG 4096
DE 15.700 usec
TE 300.0 K
D12 0.00002000 sec
PL13 18.00 dB
D1 2.00000000 sec
CPDPRG2 waltz16
PCPD2 80.00 usec
SFO2 400.1316003 MHz
NUC2 1H
PL2 -3.00 dB
PL12 18.00 dB
P1 7.00 usec
SFO1 100.6234358 MHz
NUC1 13C
PL1 -6.00 dB
D11 0.03000000 sec

F2 - Processing parameters
SI 32768
SF 100.6127290 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

1D NMR plot parameters
CX 20.00 cm
FLP 200.000 ppm
F1 20122.55 Hz
F2 0.000 ppm
PPMCM 10.00000 ppm/cm
HZCM 1006.12732 Hz/cm

HPLC CHROMATOGRAPHY

